



# From the CEO

• Santee Cooper continues to thoughtfully evaluate renewable s we begin a new year, it's natural to consider the generation that is affordable and practical. In other renewable one that just ended. As I energy developments, Santee Cooper built a 20-kilowatt solar look back on 2010, then, array at Technical College of the Lowcountry in February. We I ask: Did we provide installed a 2-kW demonstration wind turbine - the first that a utility has installed on the state's electric grid - at North Myrtle and environmentally Beach in November. And we successfully marketed Green Power protective power and water? Further, did to power events around the state, including November's Clemson-Santee Cooper add value to the state of South Carolina football game. Sales of Green Power are fully reinvested in new renewable energy projects.

> • That brings me to a final point: Santee Cooper is building a 311kW solar power station in Myrtle Beach. The Grand Strand Solar Station is the state's largest by a considerable margin, and nearly 40 percent of its \$1.3 million cost is paid for by our customers' optional purchase of Green Power. A South Carolina Energy Office grant provided another \$475,000. The Grand Strand Solar Station is possible because of these partnerships and additional funding sources.

With the efforts of our dedicated work force, Santee Cooper saw remarkable accomplishments in 2010 in spite of a very challenging economy and business climate. We remain committed to doing all we can to improve the quality of life for our customers and all South Carolinians in 2011.

**Lonnie N. Carter President and Chief Executive Officer** 

Sommi A.C.





Cert no. SW-COC-003080

The answer is yes, to both questions.

• Santee Cooper held the line on costs in 2010. Looking to 2011, our board of directors approved a budget that represents no rate adjustments - good news for our customers.

reliable

- In October, Santee Cooper sold \$231 million in refunding bonds, saving customers \$19 million in net present value over the life of the bonds. In December the board approved a sale of \$360 million in Build America bonds with an all-in true interest rate of 4,237 percent - an excellent deal for a 40-year bond structure. These bond sales help us prepare for our share of construction of two new nuclear power units, scheduled to come online in 2016 and 2019.
- Reduce The Use, our comprehensive, rebate-driven energy efficiency program, celebrated its first anniversary in September. In that year customers embraced Reduce The Use initiatives that will save more than 49 million kilowatt-hours a year.
- Santee Cooper dedicated a 1-megawatt renewable Green Power Generating Station at the Georgetown County Landfill in April, and broke ground on a 3-MW expansion at the Richland Landfill Green Power station and a new 3-MW Green Power Generating Station in Berkeley County.

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# 20WIN11

feature .....



# On the Front Lines of Reliability

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# JAMIN<sup>7</sup>

# WIND

# PHOTOS BY JIM HUFF

On a blustery Nov. 30, crews from Santee Cooper and Baker Renewable Energy raised the state's first utility-operated wind turbine that will generate electricity for South Carolina's electric grid. The installation also launched Santee Cooper's Wind Education Project, designed to demonstrate wind turbine technology, promote education and awareness about the viability of wind as a source for electricity in South Carolina, and invite feedback.

The Skystream 2.4-kilowatt turbine joins solar and landfill biogas generation in Santee Cooper's Green Power fleet. It begins generating electricity when wind speeds reach 8 mph and produces its full rated capacity when the wind blows at 29 mph.

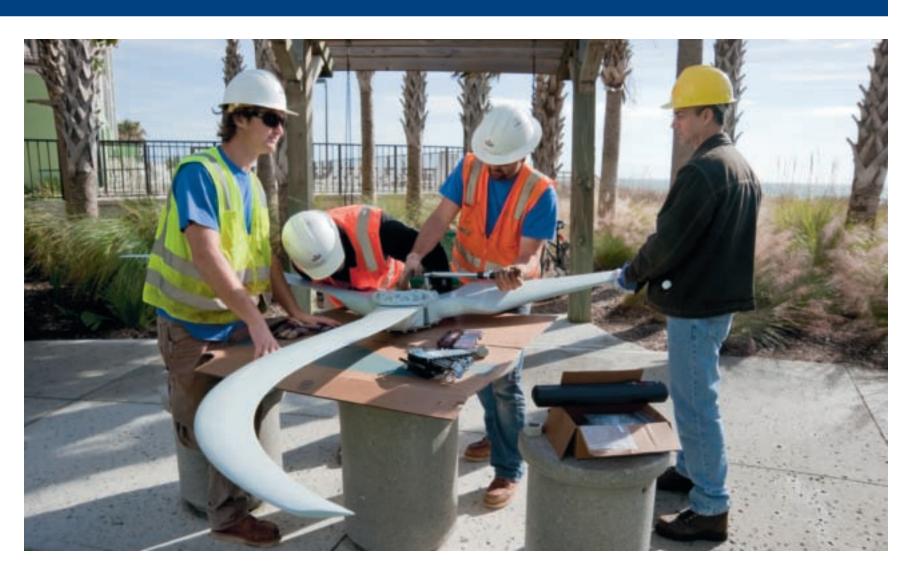
"This event is not about how much energy we're putting on the grid," said Marc Tye, Santee Cooper vice president of conservation and renewable energy. "It's a symbol of how far we've come, and of how far we still have to go in exploring wind energy.

"This turbine is a landmark demonstration project for us in the area of wind energy, and one key take-away for us will be how often the turbine generates power, how often it generates at full strength, and how often it isn't producing anything," Tye

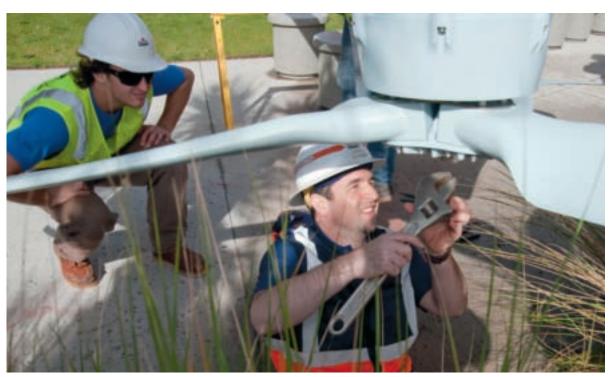
said. Based on anticipated annual wind speeds and direction, the turbine is expected to generate enough electricity to power, say, a dozen ENERGY STAR refrigerators, or to provide about 40 percent of one typical household's electric needs.

The turbine is equipped with a meter that shows real-time output and will be connected to the Internet for tracking of the energy output over time. It can easily be adapted into classroom lessons about renewable energy, much as teachers use Santee Cooper's Green Power Solar Schools program to track solar panel output at solar power stations the utility has placed around the state.

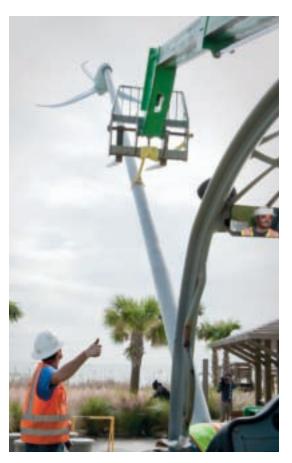
"We are proud to have this landmark project located within our city," said North Myrtle Beach Mayor Marilyn Hatley. "Wind power holds significant promise for the future of our community

















and state. This new tool will provide much needed research and it will help to create interest in wind power, especially among young people."

Santee Cooper began researching the potential for wind energy in 2005.

"Our research has shown that land-based wind isn't strong enough to support utility-scale wind energy, and so even while we dedicate this turbine today we are continuing our research into the viability and affordability of offshore wind as a source of renewable energy," Tye said.

TOWER	BLADES
33' tall	12' diameter
550 lbs.	Fiberglass reinforced composite
Galvanized steel	Swept design for greater efficiency
GENERATOR + BLADES  Designed to withstand up to 140 mph wind	



# The Big Game Goes Green

By Laura G. Varn





# Saturday, Nov. 27, 2010. 7 p.m. Death Valley. Clemson, South Carolina

No matter whether you are a native South Carolinian, or a newcomer to the state, there is one irrefutable, rock solid and tangible event that links us all together. It's the Palmetto Bowl.

Ah... the famed rivalry of the century-old Clemson-Carolina football game. It seems that on that glorious ol' pigskin Saturday, everyone in the state either bleeds orange or garnet.

And green.

Green, you ask? Why, yes, the rivalry has a new color!

This year, for the first time, the football game was powered by 100 percent Green Power. Green Power is Santee Cooper's clean renewable energy program generated from resources right here in South Carolina.

Clemson University teamed up with Santee Cooper and Blue Ridge Electric Cooperative to ensure all the power needs of the game, from the bright stadium lights and the concession stands to the Jumbo-tron, PA system and more, were produced with in-state renewable energy. Blue Ridge Electric Cooperative provides a portion of Clemson University's electricity, and Santee Cooper produces that electricity and transmits it to the cooperative for distribution.

For Clemson University, the chance to power the game with Green Power dovetailed perfectly with its overall sustainability efforts. Clemson's "Solid Green" commitment to keep its campus clean and help sustain the environment for a better future has been part of the school's DNA for years. In addition, leaders saw this Green Power





Future football stars enjoy a friendly game of pigskin while waiting for the college version game to begin.

game as an opportunity to send a powerful message to their students, faculty, and entire Clemson community that they care about the environment in South Carolina for generations to come.

"Universities are in the 'forever' business," said Clemson University President James Barker. "It's hard to get more forever than renewable energy. This was a special day for South Carolina. Not only was it the first green football game in the history of South Carolina, it showed how important green energy is to our future and Clemson was proud to play a role in it."

There wasn't a bigger supporter of Clemson or the Green Power football game on Nov. 27 than Charles E. Dalton. Dalton is not only the president and CEO of Blue Ridge Electric Cooperative, he is also the president-elect of IPTAY. This acronym stands for "I Pay

> Ten A Year," and is the financial support structure for Clemson athletics that dates back to 1934.

"Blue Ridge Electric Cooperative shares Clemson's interest in advancing sustainable and environmentally friendly practices," said Dalton. "Powering such a highenergy game with in-state renewable resources is a victory we all can celebrate."

The University of South Carolina was supportive and enthusiastic about the new twist on this historic rivalry game. School leaders were approached early on regarding the concept and jumped on board immediately. Dr. Michael Amiridis, the provost, attended the football

For more information on Green Power and how your event can be a Green Power event, visit: www.santeecooper.com/greenpower

The Clemson Tiger leads the team down The Hill, in what ABC Sports' Brent Musburger calls "The Most Exciting 25 Seconds in College Football."





Above: Clemson and Carolina officials were recognized at the end of the first quarter for their Green Power efforts. Attending were, from left to right, Bill McCall, Santee Cooper executive vice president and chief operating officer; Dr. Michael Amiridis, USC Provost;, James Barker, Clemson president; Charles Dalton, Blue Ridge Electric Cooperative president and president-elect of IPTAY; Alma Evans, Santee Cooper Green Power coordinator; and the Tiger Cub.

game and represented the University of South Carolina. Amiridis is the former dean of the College of Engineering, and all of the university's work with alternative fuels and sustainability has been under his leadership.

# The Rivalry

Separated by some 130 miles, the two educational institutions have been rivals since the late 1800s. Their respective teams first battled on the football field in 1896, and ESPN has recently named the rivalry "one of the most heated and celebrated rivalries in major college football."

The Clemson-Carolina game is the longest uninterrupted series in the South and the third-longest uninterrupted series overall, having been played every year since 1909. Nicknamed the "Palmetto Bowl" or "Battle for the Palmetto State," Clemson holds a 65-38-4 lead in the series.



From that first meeting until 1959, the game was played in Columbia every year and referred to as "Big Thursday." Since 1960, the game has alternated between both teams' home fields as the final game of the regular season.

Interestingly, approximately 40 games have been decided by a mere touchdown or less, making for plenty of last second thrills and equally excruciating pain for the millions of tried and true fans throughout the state and country.

## **Green Power Events**

The Green Power football game is a continuation of Santee

### USC quarterback Stephen Garcia led his team to a "W" in the 108th meeting of the two football programs.

Cooper's ongoing efforts to further promote Green Power to various events throughout the state.

Santee Cooper's Green Power program can help improve and preserve the environment for future generations. The best part is that a full 100 percent of the revenues generated when an event purchases Green Power go towards future renewable energy resources.

Other major Green Power events this year include the Beach Ball Classic in Myrtle Beach, the Verizon Heritage golf tournament in Hilton Head Island, NASCAR's Darlington 500/Southern 200 races, and Shuckin' in the Park at the Old Santee Canal Park in Moncks Corner.

Santee Cooper began its Green Power program in 2001. It was the first — and still only — South Carolina utility producing renewable energy and offering it to customers. With about 22 megawatts of renewable energy through landfill biogas, solar and wind, Green Power continues to grow.

Alma Evans is a native of Clemson and a graduate of Clemson University. As Santee Cooper's point person on Green Power initiatives with the electric cooperatives, she has seen this growth of Green Power.

She played a key leadership role in taking this initial football game idea — "Hey, let's try to get the Clemson-Carolina game to go Green!" and turning into a reality. Her father, John, taught in the agriculture department at Clemson for many years and she travels back home to attend every home game with her mother, Alice.

Evans participated in the on-field presentation at the end of the first quarter, in which Santee Cooper and Blue Ridge Electric Cooperative presented green footballs and framed certificates to both Barker and



Amiridis in recognition of their universities' support of renewable energy.

Evans described the moment of being on the field as a "once in a lifetime experience. As a little girl growing up in Clemson, I never dreamed I'd one day be on the field, able to give recognition to Clemson and USC. More than 80,000 fans were exposed to Green Power that day and to see the hard work pay off is rewarding in itself."

Various marketing efforts ensured as many South Carolinians as possible knew about the Green Power football game. Specially designed magazine and newspaper ads, television interviews, bill inserts, social media outreach, college publications, Jumbo-tron messages during the game and the on-field presentation all helped educate and raise awareness about the power of renewable energy.

The University of South Carolina won this year's game. The 12th man on the field — Green Power — made it a victory for all, however, no matter which team you supported! PS

Photos by Mark Crammer, The Orange and White







POWERSource: Tell me a bit about your role as Manager of Transmission Operations.

**Ben Fleming**: My area is responsible for all transmission line maintenance and right of way maintenance.

We have three territories — Northern, Central and Southern — and each of these has an area supervisor and four transmission line crews. Two of the

Central crews work out of Moncks Corner, with a third crew in Bluffton and a fourth in Pinewood. The Northern area is based out of Darlington, with crews stationed there, in Blythewood, in Hemingway and in Conway. Our Southern area is based out of Orangeburg. They have a crew in Orangeburg, one in Batesburg, a crew in Aiken and our newest crew, which is based out of Laurens.

antee Cooper serves retail customers in Berkeley, Georgetown and Horry counties, where more than 2,700 miles of distribution lines deliver electricity to some 165,000 residential and commercial customers.

Much of the state-owned utility's base load generation fleet is also found in these three counties - a relatively small area of the state - and yet Santee Cooper is South Carolina's largest power producer and the ultimate source of electricity for 2 million people throughout the Palmetto State.

How does the power reach all corners of the state? Santee Cooper's transmission system.



Ben Fleming, Manager of Transmission Operations

Comprised of some 5,000 miles of

lines and 100 substations, Santee Cooper's transmission system is about twice the size of its distribution system and the network through which power is delivered statewide.

The person who oversees the maintenance of these transmission lines is Ben Fleming. Fleming has been with Santee Cooper since May 1992, has worked at three generating stations and was Superintendent of Substation Maintenance before becoming Manager of Transmission Operations.

Read on as Fleming discusses the effort and the people required to keep Santee Cooper's transmission system so reliable.

> Then we have a right of way crew that handles all of our right of way maintenance. Their management is based in Moncks Corner, but there's a camp in Manning that the field crews operate from. They take care of all of South Carolina.



Crew Supervisor Carl Pierson conducts a tailgate session before work begins. Pierson discusses the job's logistics and hazards. Included in each tailgate session is information about the closest hospital, which underscores Santee Cooper's commitment to safety at all times.

We also have an engineering group here in Moncks Corner that supports the folks out in the field. My main role is to see the big picture and keep the resources at my disposal focused in the right areas.

## PS: How have your previous jobs at Santee Cooper helped you in your current position?

**BF**: I've developed an appreciation for the different sides of the business and how they fit together. If you talk to Generation folks, they'll tell you they're the backbone of Santee Cooper. If you talk to folks in Transmission, they're going to tell you the same thing. I'm sure you'll hear the same thing in Distribution, and there are all the supporting departments as well.

The truth is, they're all right. You've got to have all of them to best serve the customer.

### PS: What are the components of Santee Cooper's transmission system?

BF: Anything over 34 kilovolts is considered part of the transmission system. That includes the switchyards at our generating stations, the high-voltage lines and the transmission substations.

### PS: And what is the condition of Santee Cooper's transmission system?

BF: It's in very good shape. I know this because our reliability numbers support it. We measure our reliability by something called the Average Substation Availability Index, and our goal is 99.996 percent. That number doesn't mean anything until you convert it into outage time, which is an average of 20 minutes of outage time per delivery point substation for the whole year.



So if you take each delivery point substation — which are our distribution stations, the cooperative distribution substations and the industrial customers — on average each one of those stations would have 20 minutes of outage for the whole year for us to meet that goal.

We're coming off our best year on record, which was 99.9988 percent. That means each one of our customers experienced an average of six minutes of outage time in 2009.

# PS: What kind of effort is required to keep the transmission system in such good shape?

**BF**: It takes a lot of effort. We're one of the more rural utilities in the region; we have more miles of transmission line per customer than most. Our line technicians exceed at responding to outages, and they also exceed in our inspection program.

We put a lot of resources into inspecting our transmission system, and the payoff is the reliability numbers. We inspect every transmission line twice a year from a helicopter, and we do a ground patrol once a year. We see every transmission structure, every mile of transmission line and every acre of right of way an average of three times a year.



Above: Gligor watches an auger as it digs one of the holes that will secure the 90-foot steel transmission structure. Crews use a "10 percent plus two" equation when determining how deep to dig for each pole. This structure will be anchored 11 feet into the ground.

Ashton Johnson, Line Technician A, and Joseph Barrineau, Line Technician B, tilt one of the 90-foot steel poles as crews prep it for service.

At the same time, we've got to be cost-effective. We could spend two or three times what we spend right now and do more maintenance to get our reliability closer to five minutes of outage time. But our customers are probably not willing to pay the bill that comes with that extra minute. As a Santee Cooper customer, *I'm* not willing to pay that bill. I'm pleased with the reliability we've got right now, and I feel good about the balance we have between reliability and cost.

### PS: How many line technicians do you have on the transmission side?

**BF**: We're right at 60 line technicians, and there's some support staff with that. We've got 13 guys in the right of way field crews, and then we've got three foresters. All told, I think we're at about 105 employees in Transmission Operations. That includes the engineers, the support staff and everyone.





Crews lift one of the steel poles into position amid a symphony of diesel and hydraulic engines. At left, the auger prepares a hole for the second pole.

**Below:** Shadows grow longer across the picturesque right of way as crews work to install the second steel pole. Though they are in a race against time, their work remains methodical and meticulous.

PS: How do the training requirements differ between distribution lineworkers and transmission lineworkers?

**BF**: As a general rule, they're very similar. The biggest differences come in their on-the-job training. Transmission guys are working with taller poles, higher voltages. They typically do more climbing than distribution guys. Distribution linemen do more hot work — working with live wires — than transmission linemen.

PS: How much emphasis is placed on safety?

**BF**: Safety absolutely is a part of our culture, because what our crews do is so dangerous. It has to be the top focus in everyone's mind.

It takes a different kind of person to be a lineworker. It takes a certain amount of swagger or attitude, but at the same time you cannot take your mind off the fact that you're working with a rattlesnake. Whether it's up a pole or behind the wheel of a truck — and these lineworker do a lot of driving — there can be no distractions or loss of focus.



Whatever they have going on in their personal lives, they can't take any of it with them up the pole.

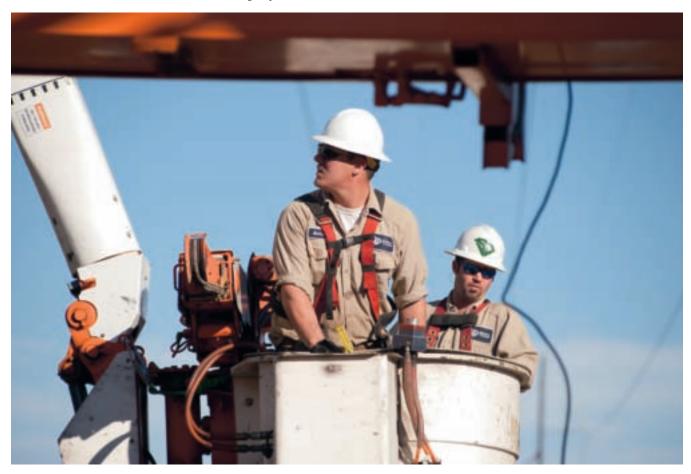
Complacency becomes a huge working hazard for these guys, and it's one of the hardest things to self-correct. These guys have to look out for each other, and there's a camaraderie that stems from that. It's almost a fraternal thing with lineworkers.

When you hire a new lineworker, normally one of two things will happen: They'll resign in the first six months, or they find they just love it. I don't know of a lineworker here who doesn't love his job.

So, you keep the ones who love it, because they take tremendous pride in their work. I've worked with a lot of different groups and a lot of good people, but you won't find someone who takes more pride in his work than a lineworker.

Our lineworkers help do the tough work to keep the lights on for our customers. They're the ones who make it happen, and they do it, again, because they take their work personally. When there's an outage in their area and their line, they take it personally. And those are the kind of people you want out there.

As crews install the second steel pole, Johnson and Brian Ackerman, Line Technician B, climb into a bucket to ground the existing wooden structure before transferring the lines to the new steel structure. Pierson says technicians can spend up to eight hours in a bucket on any given day.



# REDUCE THEUSE South Carolina

# One Powerful Year of Energy Savings

By Nicole Aiello Photos by Jim Huff More than a year ago, Santee Cooper unveiled Reduce The Use South Carolina, effectively issuing a challenge to its customers to save energy and money through becoming aware of their energy use and making smart energy changes to their homes and businesses.

Designed to significantly reduce the use of electricity with the help of some 40 innovative, energy-saving initiatives, the Reduce The Use campaign recently celebrated its one-year anniversary and continues to push forward to reach a goal of saving 209 million kilowatt-hours of electricity annually.

During the first year alone, the changes customers made through Reduce The Use programs saved 49.9 million kWhs of electricity - enough energy to power 3,700 households or approximately every home in the town of Surfside Beach for a full year.

While Santee Cooper spearheaded and encouraged participation in Reduce The Use, much of the success of the first year is a result of forward-thinking, energyminded customers who saw the potential for short-term rebates and long-term savings by utilizing the campaign's initiatives.

"I'm excited and proud that Santee Cooper customers have taken ownership in the campaign and are taking advantage of our initiatives to reduce energy in their homes and businesses," said Marc Tye, vice president of Conservation and Renewable Energy. "The success we've had in the first year is really a testament to our customers."

Andy McCormack, a residential Santee Cooper customer in Myrtle Beach, said Reduce The Use came at a perfect time for his energy dilemma. McCormack noticed his electric bill was increasing and asked Santee Cooper to do an energy audit on his home.

With the help of a Santee Cooper energy advisor, McCormack found out his aging heat pump was the source of the problem. McCormack was able to secure a Reduce The Use \$600 rebate for installing a new, energy-efficient system. McCormack says he's already seeing the difference.

"It's made a big reduction in my bills from last year," McCormack said. "And I've told the guys down at work about the program. I told them I can count on Santee Cooper to help me out."

"The success we've had in the first year is really a testament to our customers." -Marc Tye

It might seem peculiar that a utility business is asking its customers to reduce their use of electricity. Santee Cooper is a non-profit organization, and its chief focus is on what's best for customers, not on making money. If customers use less of its product, it ultimately means less generation that needs to be built for the future. That helps keep costs down and benefits everyone.

The demand for electricity is dynamic and constantly changing.



As demand increased, Santee Cooper reviewed its options and chose to revamp its decades-old conservation program. Energy efficiency is the least expensive way to meet energy demand, and it is already proving a powerful asset as Santee Cooper continues to plan long-term for South Carolina's energy needs.

In Reduce The Use's introductory year, seven major initiatives were rolled out to customers: a Refrigerator Rebate initiative

Among the first-year Reduce The Use programs are rebate programs encouraging commercial and residential customers to purchase energy-efficient refrigerators and recycle their old ones.

for residential customers (\$35-\$110 rebate), a Refrigerator Rebate initiative for commercial customers (\$35-\$110 rebate), a Compact Fluorescent Light (CFL) bulb distribution initiative for residential customers (free), a CFL bulb distribution initiative for commercial customers (free), a Smart Energy New Homes ENERGY STAR initiative for homebuilders (\$1,600 rebate), a Smart Energy New Homes initiative for homebuilders (\$1,000 rebate) and a Smart Energy Existing Homes initiative for residential customers (\$600 rebate).

Customers took advantage of the rebates, and Santee Cooper



is doing its part, too, by replacing energy-hungry lighting and outdated equipment at its facilities. "It's important for Santee Cooper to lead by example, and we have been making changes to our own facilities to help reduce our use of electricity," said Tye. "Although our Energy Services Department has been leading the charge, the changes Santee Cooper has made have been the result of a collaborative effort by all our employees." Santee Cooper changed out 106 HVAC units and upgraded 6,623 light fixtures.

Santee Cooper employees are showing their passion for the new energy-saving initiatives not only by saving energy, but also by creating unique ways to energize customers and celebrate Reduce The Use successes. One distinctly impressive milestone, giving away the 1 millionth CFL bulb, was memorialized by an unusual musical performance last July.

Spectators looked on as a flash mob made up of first two, then six, then 12 and finally more than 40 people spontaneously erupted into dancing in front of an unsuspecting audience at Chicora's Beach Colony Resort in Myrtle Beach. One by one, the would-be dancers stopped reading books, sunbathing or walking the boardwalk to do the "Electric Slide" in their electric green Santee Cooper T-shirts.

"We wanted to have a true celebration to commemorate distributing our one millionth CFL bulb," said Laura Varn, vice president of Corporate Communications. "The flash mob did that and more for us. It was unique, innovative and fun, and the fun will live on in video form on the Internet."

The flash mob can still be viewed on Santee Cooper's You Tube channel, at www.youtube.com/santeecoopergreen.

An occupancy sensor keeps the lights on in this Conway Middle School 6th-grade classroom while students are in class and automatically turns the lights out when there is no movement in the room.







Paul Hucks, energy technician with Horry County Schools, checks the occupancy sensor his team installed in a computer lab at Conway Middle School.

# "It's a dirty job."

That's how Paul Hucks, energy technician for the Horry County School District, sometimes describes his job. Within the 26 school buildings Santee Cooper provides electricity for that he and his energy team monitor, it's not necessarily the physical dirt that he's referring to. It's the fact that not everyone likes being told to turn out the lights. And Hucks knows that turning out the lights makes a big impact.

"We're all creatures of bad habits. You can tell people to turn the lights off and it really doesn't ring a bell, but when you turn the lights out in 50 or 75 classrooms, it makes a big difference in energy savings and energy bills," explains Hucks.

His relentless push to conserve energy during his 26-year career with the school system makes him an A student in saving the schools thousands of dollars each year. And Hucks is giving an A to Santee Cooper for its Reduce The Use campaign.

"Reduce The Use programs are creating awareness for how easy it can be to save energy, like by turning out the lights or replacing old incandescent lights with CFLs," said Hucks. "The programs also offer rebates for the work we're doing to save energy, and this is the first time programs like that have come around."

The Horry County School District received a \$93,400 rebate from Santee Cooper after it participated in a pilot program for a new initiative currently being rolled out to

commercial customers. Through the pilot program and a grant, Hucks and his team put 1,868 occupancy sensors, or sensors that turn on the lights when someone walks into a room and turn off the lights if there is no activity in the room, into classrooms and restrooms in a variety of schools on the Santee Cooper grid.

Hucks said although getting the rebate check is a tangible way for him to demonstrate to others the real, immediate value of turning off the lights, the savings the school system will experience over the years are his main motivation.

The celebration, innovation and hard work surrounding Reduce The Use continues as Santee Cooper rolls out even more rebate programs for residential and commercial customers in its second year. In September, a heat pump program for residential customers was introduced and offers rebates of up to \$700 in conjunction with the Smart Energy Existing Homes initiative. In addition, residential customers can earn a rebate of \$35 with the new water heater program.

For commercial customers, more is in store as 2011 gets underway, including rebates for improvements to the building envelope, HVAC units, lighting (like the occupancy sensors Horry County Schools installed) and commercial refrigeration. To kick off the new initiatives, Santee Cooper employees escorted the new Reduce The Use van, which is wrapped in Reduce The Use messages, to ECK Supply Co. in Myrtle Beach on Dec. 9 to share cookies, coffee and new program information with contractors and builders.

If you ask Hucks about the new programs, he says he'll be one of the first in line to see if the school district can benefit.

"I feel really good about Santee Cooper, and I feel really good about the work they're doing to reward their customers. I'm looking forward to seeing what other programs we can take part in, how much more energy we can save and how much more in rebates we can put back into the schools," he said.

You can find out more information on the Reduce The Use programs at www.ReduceTheUse.com. PS

Coleman talks to Chris Yow of Coastline Electric outside of ECK Supply Co. in Myrtle Beach about Santee Cooper's newest Reduce The Use initiatives for commercial customers.



Sherry Coleman, a Santee Cooper energy advisor for commercial customers, explains new Reduce The Use initiatives to employees and customers at ECK Supply Co. in Myrtle Beach during a promotional van tour.







# Primed for Growth

By Willard Strong

Photos by Jim Huff

When the Lake Marion Regional Water System entered commercial operation in May 2008, a dream that outlasted skeptics and scoffers became a reality.

A reliable, safe and affordable supply of one of life's important necessities bore fruit after years of study, funding challenges and political intrigue, typical of any project demanding trust and cooperation among federal, state, county and municipal entities.

"The system is a journey, not a destination," says Johnnie Wright Sr., chairman of the Lake Marion Regional Water Agency. "I'm gratified that our members continue to support the project and work together."

The agency's membership includes representatives from the counties of Berkeley, Calhoun, Clarendon, Dorchester, Orangeburg and Sumter, and the town of Santee.

As the system enters its third full year of operation, the steadfastness and purpose of the agency's leadership continues to provide a basis for solid and steady growth. The system's 8-million gallons per day (mgd) treatment plant is located off S.C. Highway 6 near Santee.

Water drawn from Lake Marion currently provides for the town of Santee's 1,035 customers. Many customers are large water users, such as the hotels, motels and eateries lining the town's thoroughfare that traverses Interstate 95.

On a typical summer day, Water System Manager Darla Barnette reports the system's one-mile pipeline from the plant to the town will deliver 300,000 gallons of water. In August, the system treated and delivered 8 million gallons.

Funded and constructed by the U.S. Army Corps of Engineers, the \$36 million system is owned and operated by Santee Cooper. The state-owned utility also owns and operates the 36 mgd Santee Cooper Regional Water System, which draws water from Lake Moultrie and treats it at a plant near Moncks Corner. Constructed by Santee Cooper, the 36 mgd system serves four Lowcountry water utilities and has been in operation since October 1994.

"Santee Cooper has built upon its experience in the water business," says Barnette, who manages both systems. "It is a good example of how we add value to the state and provide a basic public service, beyond providing electric power to our residential, municipal, commercial and industrial customers, and to the 20 electric cooperatives in South Carolina."

The Lake Marion system features a 1 million gallon elevated storage tank and has 4 million gallons of ground storage capability.

The end of 2010 marked another milestone in the growth of the system: the completion of the Holly Hill Reach, a five-mile long pipeline. Toward the end of the summer, as the \$5.05 million project



Richard Rosebrock (left), who represents Dorchester County on the Lake Marion Regional Water Agency's steering committee, confers with Johnnie Wright, agency chairman, at a recent meeting. Rosebrock serves on Dorchester County Council, representing District 5.

# Santee Cooper Regional Water System upgraded

The Lake Marion Regional Water System isn't the only water system the state-owned electric and water utility owns and operates.

The \$34.7 million Santee Cooper Regional Water System has recently been upgraded and on a typical summer Sunday afternoon, operators at the system's treatment plant see demand for their commodity rise—as endusers wash cars and clothes, fill pools, and water lawns.

"The peak demand is in the Summerville and Sangaree areas," said Water System Manager Darla Barnette, "It's usually between 3 a nd 8 p.m. and as the system has grown since beginning in October 1994, we've seen a steady increase in peak demand in those areas."

That's the r eason the system recently invested \$2.7 million in equipment upgrades at the treatment plant and at the 1-million gallon storage tank, located just west of Carnes Crossroads on U.S. Highway 176.

"We're matching the transmission system to the plant's treatment c apacity," Barnette's aid. "These u pgrades ensure more reliable service to our system, both now and in the future. Before, our pumps at the plant had to run harder to boost the water pressure. This new booster station allows us to operate the system more efficiently. If a fire breaks out, a water main fails, or an industrial demand occurs, we like to have our tanks full."

The 3 6-million gallons per day wholesale system is the source of water for four Lowcountry u tilities: the Summerville Commissioners of Public Works, the Berkeley County Water and Sanitation Authority, the City of Goose Creek Public Works Department and the Moncks Corner Public Works Commission.

"Santee C ooper i s g rowing i n i ts w ater b usiness," Barnette said, citing a 15 percent increase in water sales over this time last year to the 155,000 consumers on the system. In 2009, the system sold 5.456 billion g allons of treated water to the Lake Moultrie Water Agency, the entity comprised of the four utilities getting water from the system. The agency then sells the water to its four members.

On a y early a verage B arnette s aid, t he s ystem's 2 6 miles of p ipe I ines d eliver a bout 1 6 m gd. S ometimes, hot weather spikes demand, like it did on July 22, 2006, when a r ecord 22.05 m gd w as d elivered. That s purred the system's second major upgrade, from 30 mgd to 36 mgd, a \$7.2 million project completed by Jan. 1, 2008.

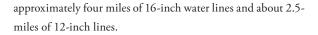
"The original system has come a bng way," said Barnette. "We have an outstanding team and skilled staff here at the water plant and we'll continue to grow as the economy recovers. These upgrades and future expansions to our system will ensure a safe and reliable source of water for our customers."

Water System **Operator** Dean Ishmael checks the water level of the solids clarifier reservoir at the Lake Marion **Regional Water** System's treatment plant near

was nearing its end, Santee Cooper assisted the Corps in flushing the 30-inch pipeline, which stretches from Santee to Wells Crossroads, located at the intersection of U.S. highways 15 and 176.

Lake Marion system. This \$4.48-million project entails laying

As 2011 began, construction continued on the Elloree/ Calhoun Reach, another example of continued growth of the



Barnette projects the Elloree/Calhoun Reach will be complete by December of this year.

As the system expands, long-time agency members patiently wait for the day their county will receive water that will offer the prospect of marketable economic development opportunities. One such supporter is Richard Rosebrock, who represents District 5 on Dorchester County Council and serves as chairman of the council's public works, property and utilities committee.

"If we could get water from the Lake Marion system," Rosebrock says, "we could bring much-needed industry to the western part of Dorchester County."

About 85 percent of Dorchester County's population lives in

the Summerville area. But Rosebrock and other leaders believe the St. George and Harleyville areas, in close proximity to interstates 95 and 26, are poised for progress when the economy rebounds. For that to happen, he says, the infrastructure needs to be in place. The Lake Marion system is part of that infrastructure.

Donnie Hilliard, recently elected mayor of Santee,

Technician A Richard Wimberly (left) and Ishmael review the daily checklist at the Lake Marion Regional Water System treatment plant, part of the routine to keep the plant operating efficiently.





echoes Rosebrock's view. Hilliard, an Orangeburg County political veteran, understands that the water system supplying his town marks only the beginning.

"What's been done here isn't finished by any means," says Hilliard. "If the infrastructure is not there, development's not going to happen."

Hilliard and others in Orangeburg County remain excited about Jafza South Carolina LLC, a project announced over three years ago with the prospect of transforming Santee and providing economic opportunity in the region on an unprecedented scale.

The Jafza project is projected to be 1,300 acres of logistics, distribution and manufacturing, with warehouses initially at its centerpiece, and ties to the ports of Charleston and Savannah. It will require water from the Lake Marion system and power from Tri-County Electric Cooperative, which has Santee Cooper as its source of electricity.

The recession has slowed the project's advancement. The announced projections of 8,000 to 10,000 jobs and the \$1.2 billion in investment over a 10-year period are slower in coming than supporters hoped.

A subsidiary of Jafza International, located in Dubai, the United Arab Emirates, the Jafza project has so far cleared a hundred or so acres of land. Last May, Jafza obtained level-four site certification from the S.C. Department of Commerce. This clears the way for bricks-andmortar work.

Orangeburg economic development officials are confident the project will still bear fruit. Funds from Washington for upgrading the interchange at I-95 and U.S. Highway 301 have been set aside.

"That's going to happen," Hilliard says of Jafza. "That's why I see the water system here as an investment, an investment in the future.

I'd like young people in our area to have more options, options they simply don't have now."



Richard Wimberly, technician A, adjusts a check valve on a vertical-turbine pump in the finished water building at the treatment plant.

Hilliard and his generation have seen youth flee the area to seek their fortune after graduating from high school and college. It is his hope that the work he and others are doing to develop infrastructure will provide opportunities for new generations to remain, opportunities so elusive now.

So work will continue on the Lake Marion system. Outlying partners in Dorchester and upper Berkeley County will plan for more pipelines, water tanks and rights of way - critical components in assembling more tools for the economic development toolbox.

Overseeing the growth of the system is the Lake Marion Regional Water Agency's Technical Advisory Group, charged with evaluating the engineering aspects of building a burgeoning and complex method of delivering water. Certified public accountants also assist the agency with financial accountability, crucial with dealing with federal and state funds.

"I think we have a solid group of people working toward moving forward," Barnette says of the Lake Marion system. "We're fortunate to have a reliable source of water and the confidence of local and state leaders in what we're doing. I believe the availability of affordable water will become an even more important commodity in South Carolina as our population increases." PS

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# Power agreement approved

Santee Cooper and Piedmont Municipal Power Agency (PMPA) announced Dec. 13 the approval of a long-term power agreement in which Santee Cooper will sell approximately 200 megawatts of power to PMPA beginning in 2014 and more as PMPA's customer demand grows. The contract begins Jan. 1, 2014.

PMPA provides electricity to 10 municipal utilities in South Carolina, serving the cities of Abbeville, Clinton, Easley, Gaffney, Greer, Laurens, Newberry, Rock Hill, Union and Westminster.

"Santee Cooper is pleased to announce this contract with PMPA and to begin serving its city members," said Lonnie Carter, Santee Cooper president and CEO. "This PMPA contract helps Santee Cooper operate more efficiently by more fully utilizing our generating resources, and it lets us broaden our customer base at the same time."

"PMPA looks forward to purchasing our supplemental power and energy needs from Santee Cooper," said Coleman Smoak, PMPA's general manager. "We believe that working with Santee Cooper will be a great asset as we look to the future needs of our member-cities."

### Biomass deals in works

**The Santee Cooper Board** of Directors approved in October purchase power agreements with two firms for 95 megawatts of biomass, a major development in the utility's nine-year-old renewable energy program.

The board approved contracting with Domtar Paper Co. LLC for 50 MWs of renewable biomass-fueled energy that Domtar already was producing at its Bennettsville, S.C. pulp and paper mill, and that generation is already in Santee Cooper's mix. The board also approved contracts with Southeast Renewable Energy for 45 MWs of biomass-fueled energy to be produced at three 15-MW plants around the state, in Dorchester, Kershaw and a third county to be named. The projects would provide about 60 new jobs, 20 per plant, and support others in the logging, trucking and related industries.

"These contracts significantly increase the amount of renewable power Santee Cooper can provide to our customers and signify our continuing commitment to environmental stewardship and economic development in our state," said Lonnie Carter, president and CEO. "These are exactly the sort of practical, cost-effective renewable projects that Santee Cooper wants to promote and support."

Biomass generation is the most cost-effective renewable resource in South Carolina. Santee Cooper already produces 22 MWs of renewable generation from landfill methane gas, a type of biomass, which the utility markets to customers as Santee Cooper Green Power.

# **Blog debuts**

Offering customers and stakeholders a new way to keep up with their state-owned utility, Santee Cooper has launched a blog. Available at http://blog.santeecooper.com, the Santee Cooper blog is a timely and interactive source of news, notes, tips and tidbits.

Contributors include Jay Hudson, manager of environmental management; Ed Bodie, manager of retail services; Ken Sandiford, manager of customer care; as well as Nicole Aiello and Kevin F. Langston from corporate communications. Topics covered so far include energy-saving tips, environmental issues, history of the Santee Canal and customer service.

In addition to this blog, Santee Cooper communicates through a corporate Twitter feed (http://twitter.com/santeecooper), YouTube pages for Santee Cooper Green (http://www.youtube.com/ SanteeCooperGreen) and Reduce the Use (http://www.youtube.com/ ReduceTheUse), as well as an RSS feed of its news releases (available from Santee Cooper's homepage at http://www.SanteeCooper.com. Santee Cooper launched its new mobile website in late December. PS











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